

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A method of making high-density (>7.0g/ml) sintered, iron-based alloy parts characterised by the steps of:
 - (i) mixing <6% by weight an atomised boron-containing master alloy powder, or a plurality of master alloy powders, at least one of which is boron-containing, with a conventional iron powder or iron alloy powder, said master alloy powder or said plurality of master alloy powders having a mean particle size of 1-30 microns; and
 - (ii) pressing and sintering the mix to an increased density to produce the part required.
2. (Original) A method as claimed in Claim 1, wherein before pressing and sintering, graphite is added to the mix in conventional amounts as used in powder metallurgy technology.
3. (Currently Amended) A method as claimed in Claim 1 ~~or Claim 2~~, wherein before pressing and sintering, a lubricant is added to the mix in conventional amounts as used in powder metallurgy technology.
4. (Currently Amended) A method as claimed in Claim 3, wherein the said lubricant is a solid.

5. (Currently Amended) A method as claimed in Claim 3, wherein ~~the~~ said lubricant is a liquid.

6. (Currently Amended) A method as claimed in Claim 3, wherein ~~the~~ said lubricant is a solid dissolved in a liquid.

7. (Currently Amended) A method as claimed in ~~any preceding claim~~ Claim 1, wherein ~~the~~ said master alloy powder(s) contains from 1-20% by wt boron.

8. (Currently Amended) A method as claimed in ~~any preceding claim~~ Claim 1, wherein ~~the~~ said master alloy powder(s) has a mean particle size from 1-30 microns, preferably of under 20 microns.

9. (Currently Amended) A method in accordance with ~~any preceding claim~~ Claim 1, wherein ~~the~~ said sintering is effected at temperatures in the range of 1050°C to 1300°C, and preferably below effected at temperatures in the range 1050 C to 1300 C, and preferably below 1200 C.

10. (Currently Amended) A method as claimed in ~~any preceding claim~~ Claim 9, wherein said sintering is effected in a reducing, inert or vacuum atmosphere at a temperature below 1200°C.

11. (Currently Amended) A method in accordance with any preceding claim as claimed in Claim 1, wherein from <6% by weight of atomised master alloy powder (s) is mixed with the conventional iron or low alloy powder said sintering is effected in a reducing, inert or vacuum atmosphere.

12. (Currently Amended) A method in accordance with any preceding claim Claim 1, wherein the said pressing is cold pressing.

13. (Currently Amended) A method in accordance with any preceding claim Claim 1, wherein the said pressing is warm pressing at a temperature of <300°C.

14. (Currently Amended) A method in accordance with any preceding claim Claim 1, wherein the said part has a pressed density of the part is 6.6-7.4g/ml.

15. (Currently Amended) A high-density sintered iron based part made in accordance with the method of any preceding claim by the method making high-density (>7.0/ml) sintered, iron-based alloy parts characterised by the steps of:

(i) mixing <6% by weight an atomised boron-containing master alloy powder, or a plurality of master alloy powders at least one of which is boron-containing, with a conventional iron powder or iron alloy powder, said master alloy powder or said plurality of master alloy powders having a mean particle size of 1-30 microns; and

(ii) pressing and sintering the mix to an increased density to produce the part required.

16. (Original) A part as claimed in Claim 15, having a boron content above 0.05% by wt.
17. (Currently Amended) A part as claimed in Claim 15 or ~~Claim 16~~, having a density from 7.2-7.8, preferably 7.4-7.6g/ml.
18. (New) A part as claimed in Claim 15, having a density of 7.4-7.6g/ml.